

I Claim:

1. A method of operating a terminal in a wireless communications system, the system having a plurality of uplink and 5 downlink channels available for use, the terminal being arranged to use an uplink channel and a downlink channel selected from the plurality, the method comprising:

determining whether the terminal is transmitting at a power which may cause interference to an adjacent uplink channel;

10 determining which downlink channel is associated with the adjacent uplink channel;

monitoring that downlink channel and deciding, on the basis of the monitoring, whether there is a need to operate the terminal in a manner which will reduce interference.

15 2. A method according to claim 1 wherein there is a first band of channels and a second band of channels available for use and the terminal can use either an uplink channel and a downlink channel from the first band or an uplink channel from the first 20 band and a downlink channel from the second band.

25 3. A method according to claim 2 wherein, within the first band of channels, each uplink channel is paired with a downlink channel, with the uplink and downlink channels in each pair being separated by a known frequency offset, and wherein the step of determining which downlink channel is associated with adjacent uplink channel comprises determining a downlink channel which is offset from the adjacent uplink channel by the known frequency offset.

30 4. A method according to claim 3 wherein the first band of channels is a core band of channels and the second band of channels is an extension band of channels.

5. A method according to claim 1 further comprising operating the terminal in a manner which will reduce interference by selecting an alternative uplink channel for the terminal to use and transferring communication to the selected alternative uplink
5 channel.

6. A method according to claim 5 wherein the step of selecting an alternative uplink channel comprises testing whether the alternative channel is acceptable for use.

10 7. A method according to claim 6 wherein the step of testing whether the alternative channel is acceptable for use comprises monitoring a metric which is indicative of usage of a downlink channel which is associated with an uplink channel that is
15 adjacent to the alternative channel.

8. A method according to claim 1 further comprising operating the terminal in a manner which will reduce interference by selecting an alternative transmission rate for the terminal.

20 9. A method according to claim 1 further comprising operating the terminal in a manner which will reduce interference by selecting an alternative transmission system for the terminal.

25 10. A method according to claim 1 wherein the step of monitoring that downlink channel comprises monitoring a metric which is indicative of usage of that downlink channel.

30 11. A method according to claim 10 wherein the metric is received power.

12. A method according to claim 1 wherein the step of monitoring that downlink channel comprises determining whether the terminal

is likely to cause interference to the adjacent uplink channel associated with that downlink channel.

13. A method according to claim 1 wherein, if the terminal is
5 not transmitting at a power which may cause interference to an adjacent uplink channel, the other steps of the method are not performed.

14. A method according to claim 1 further comprising exchanging
10 signalling information between the terminal and network to operate the terminal in a manner which will reduce interference.

15. A method according to claim 1 wherein the wireless
communications system is a wideband wireless communications
15 system.

16. A method according to claim 15 wherein the wideband communications system is a W-CDMA system.

20 17. A control apparatus for a terminal in a wireless communications system, the system having a plurality of uplink and downlink channels available for use, the terminal being arranged to use an uplink channel and a downlink channel selected from the plurality, the control apparatus comprising:

25 means for determining whether the terminal is transmitting at a power which may cause interference to an adjacent uplink channel;

means for determining which downlink channel is associated with the adjacent uplink channel;

30 means for monitoring that downlink channel and deciding, on the basis of the monitoring, whether there is a need to operate the terminal in a manner which will reduce interference.

18. A control apparatus according to claim 17 wherein there is a first band of channels and a second band of channels available for use and the terminal can use either an uplink channel and a downlink channel from the first band or an uplink channel from the 5 first band and a downlink channel from the second band.

19. A control apparatus according to claim 18 wherein, within the first band of channels, each uplink channel is paired with a downlink channel, with the uplink and downlink channels in each 10 pair being separated by a known frequency offset, and wherein the means for determining which downlink channel is associated with adjacent uplink channel comprises determining a downlink channel which is offset from the adjacent uplink channel by the known frequency offset.

15 20. A control apparatus according to claim 19 wherein the first band of channels is a core band of channels and the second band of channels is an extension band of channels.

20 21. A control apparatus according to claim 17 which is arranged to operate the terminal in a manner which will reduce interference by selecting an alternative uplink channel for the terminal to use and transferring communication to the selected alternative uplink channel.

25 22. A control apparatus according to claim 21 which is arranged to test whether the alternative channel is acceptable for use.

23 30 A control apparatus according to claim 22 which is arranged to test whether the alternative channel is acceptable for use by monitoring a metric which is indicative of usage of a downlink channel which is associated with an uplink channel that is adjacent to the alternative channel.

24. A control apparatus according to claim 17 which is arranged to operate the terminal in a manner which will reduce interference by selecting an alternative transmission rate for the terminal.

5 25. A control apparatus according to claim 17 which is arranged to operate the terminal in a manner which will reduce interference by selecting an alternative transmission system for the terminal.

10 26. A control apparatus according to claim 17 which is arranged to monitor that downlink channel by monitoring a metric which is indicative of usage of that channel.

27. A control apparatus according to claim 26 wherein the metric is received power.

15 28. A control apparatus according to claim 17 which is arranged to exchange signalling information between the terminal and network to operate the terminal in a manner which will reduce interference.

20 29. A terminal for use in a wireless communications system including a control apparatus according to claim 17.

25 30. A wireless communications system incorporating a terminal according to claim 29.

31. A wireless communications system according to claim 30 in the form of a wideband wireless communications system.

30 32. A wireless communications system according to claim 31 in the form of a W-CDMA system.

33. A method of handling a connection between a terminal and a base station in a wireless communications system having a

plurality of uplink and downlink channels available for use, the method comprising:

assigning an uplink channel and a downlink channel to the connection;

5 determining, during the call, whether the terminal is transmitting at a power which may cause interference to an adjacent uplink channel;

determining which downlink channel is associated with the adjacent uplink channel;

10 monitoring that downlink channel and deciding, on the basis of the monitoring, whether there is a need to operate the terminal in a manner which will reduce interference.

34. Software for operating a terminal in a wireless
15 communications system, the system having a plurality of uplink and downlink channels available for use, the terminal being arranged to use an uplink channel and a downlink channel selected from the plurality, the software being arranged to cause a control apparatus of the terminal to perform the steps of:

20 determining whether the terminal is transmitting at a power which may cause interference to an adjacent uplink channel;

determining which downlink channel is associated with the adjacent uplink channel;

25 monitoring that downlink channel and deciding, on the basis of the monitoring, whether there is a need to operate the terminal in a manner which will reduce interference.